

Chapter 13 – Building and Structures

Cleaning and Minor Repairs

13.1 Purpose

This chapter covers BMPs for ongoing maintenance and minor repairs to buildings and structures in the King County Park System. Proper maintenance is important to allow the public to use clean, safe and attractive facilities, but also to protect the major public investments in the buildings and structures.

13.2 Definitions

Buildings and structures: any constructed buildings or structures within the inventory or grounds of the King County Park System.

13.3 Background

Parks is home to many types of buildings and structures. Buildings vary from major facilities like park headquarters at Marymoor Park, to swimming pools and gymnasiums, to maintenance barns. Structures range from boardwalks and docks, to climbing rocks and grandstands, to sculptures and gazebos. All these amenities serve a particular purpose.

13.4 Planning

King County Park System buildings and structures are planned through a public process with input from staff and the community. It is important that Resource and Crafts staff lend expertise to design development so that a building or structure meets its intended purpose and is maintainable with expected resources. Buildings should be reviewed on a 10-year cycle to determine if they are in sound condition and meet use requirements and code compliance. Building components (i.e., fixtures, doors, heating systems) should be inspected regularly via a preventative maintenance plan coordinated through the Crafts Crew. The following are BMPs for planning buildings and structures:

- Install electrical and plumbing fixtures, outdoor furniture and door hardware that meet Parks' standards.
- Do not introduce new items without consultation with the Crafts Crew.
- Have Crafts Crew review all proposed plans for park renovations and new construction.
- Record all specifications on newly installed products with the Crafts Crew. Include data on paint products and colors, electrical and plumbing fixtures, and door hardware.

13.5 Design

Facility design determines how well a building can be maintained. A facility should be designed to be practical, functional, attractive and vandal-resistant. Features should provide the utility

desired and be within the theme or character of the park. Ease of maintenance and durability both affect long-term maintenance costs and ultimate condition of each park. Whenever possible, features and fixtures should be standardized to reduce replacement costs, parts inventory, and ensure high quality. Design all features to be vandal-resistant. Use unbreakable plexi-glass covers and lens. Choose stainless steel over light gauge, corrosive metals. Never select features with handles or other protrusions that easily break. Design should reflect:

- Current and future resource staffing levels.
- Staff capabilities.
- Maintenance efficiencies.
- King County Park Systems-standardized products.
- Quality, energy-efficient products.
- Maximum vandal-resistance.
- Current and future use. Don't design to minimum needs. Consider *year-round* use even if a facility is not presently used all year.
- Sustainable, "green" building standards.

Funding is generally more available for new construction or re-development, than for maintenance. The installation of labor saving features and high-quality products should be key design principles. Labor saving features for parks include:

- Mowing strips under fence lines.
- Paved service paths to each park feature.
- Disease and pest-resistant plantings.
- Simple and functional layouts.
- Ensure all exterior wood is pressure-treated, plastic (or other non-degradable materials) and all fasteners are stainless steel.
- Do not plant deep or thick rooted vegetation within 10 feet of sewer and water lines.
- Do not plant bushes or other large shrubbery close to building walls.
- Install ground cover that cannot be used by vandals to plug drains. Do not use rocks less than 5/8 inches in diameter.
- Make all valve boxes visible, easily accessible, and vandal-resistant.
- Use twist-type covers for round valve boxes in vegetated areas.

- All exterior electrical fixtures and receptacles on shelters, athletic courts and fields should be vandal-resistant. Recess electrical outlet boxes.
- Design all features with optimal vandal resistance in mind. Use unbreakable plexi-glass, stainless steel, or heavy gauge metals. Maximize lighting outside facilities.
- Locate electrical manhole covers away from maintenance vehicle traffic. Use appropriate cover to withstand weight.
- Install 20 amp (minimum) receptacles for pop machine use at all major activity areas in the park. These include backstops, restrooms, and community centers.
- Where possible, locate electrical panel in independent room, with no storage allowed.
- Allow for future electrical installations by designing for extra electrical capacity beyond current need.
- Use stainless steel fasteners and fixtures.
- Use solid or recycled plastic products whenever possible. Plastic products do not rust or rot, are highly durable, and tend to be more vandal-resistant. Use solid plastic toilet stalls, and plastic lumber decking.
- Design plumbing system to allow for a winterization using high-pressure air.

13.6 Maintenance Practices

Building and structure maintenance is broken into routine cleaning and maintenance, and preventive maintenance and repairs. The following portions of this chapter identify the BMPs for each of several general categories of buildings and structures in the King County Park System.

13.7 Field Offices

Field offices are scattered throughout the park system. Recreation, Resource, and Administration staffs are located in many buildings. The following are BMPs for maintaining offices in the King County Park System:

Ongoing/Routine Maintenance

- Check entire structure regularly for accumulated moss or debris on roof. Remove debris and accumulated organic material from gutters and downspouts.
- Sweep, mop, and vacuum floors and rugs.
- Replace consumable toiletry materials.
- Clean restrooms and kitchens daily. Make minor repairs as needed.
- Secure any loose toilet seat. Report any damaged toilet seat to the Crafts plumbers.

- After washing down concrete or ceramic tile floors with a hose, thoroughly clean out all floor drains. Run hose at highest water pressure directly over floor drain grate.
- Sweep, vacuum and/or mop floors daily. Do not wax wood floors. Use a distilled vinegar and water solution to clean.
- Keep offices clean and organized.
- Clean and dust walls and woodwork annually.
- Pick up debris and empty garbage daily.
- Use electrical cords properly. Allow no multiple plug-ins. Use only three-pronged, grounded electrical cords. Discard immediately any damaged cords.
- Wash windows at least annually. Report all broken glass immediately to the Crafts Supervisor.
- Replace “regular” (i.e., fluorescent and incandescent) light bulbs as needed. Do not replace the High-Intensity Discharge (HD) bulbs used in spotlights, fields, parking lots, gyms and natatoriums. Initiate a work request to the Electricians’ Shop for HD bulbs. Clean light fixture covers (lens) regularly.
- Do not obstruct heating vents and elements. Keep them clear of any combustible materials.
- For all heating systems, use high-pressure dusting air (available at Renton Stores) to do quarterly cleaning of all intake and exhaust vents and grids.
- Ensure that fire codes are met, and safety hazards are eliminated. Do not store anything in front (within 3 feet) of electrical panels, switchboards or control panels. These “free and clear zones” must be marked with red floor paint. Initiate work requests for painting as needed.
- Do not store materials in front of, or nearby, any control valves, piping or other mechanical devices.
- Keep shrubbery and other vegetation away from the building walls.
- When graffiti is found in a small area, attempt to remove with the Parks approved graffiti removal product. If unsuccessful, or for large areas, contact the Crafts Supervisor immediately for removal within 24-48 hours. **Never** paint over the damaged area.
- Regularly open and close faucets and shower valves to insure proper functioning. No excessive hand pressure should be needed to shut off a faucet or valve. Fixture should not leak during operation.

- Initiate a work request to the Plumbers' Shop immediately for any problem with flushometers, faucets, urinals, toilets, sinks, drains, traps, showers, drinking fountains or hose bibs.
- Initiate a work request immediately to the Carpenters' Shop for any problem with a lock, door, hardware, window, siding, roof, gutter, cabinet, counter, floor covering, wall molding, structural component, toilet stalls, office cubicles or accessories, bridge, deck, stairs, walkway or any other building component.
- Initiate a work request immediately to the Electricians' Shop for any problem with electrical power, outlets, light switches, light fixtures, alarms, pumps, fans, motors, wiring, electrical panels or any other electrical device.
- Report to the Crafts Supervisor immediately all damaged electrical and plumbing fixtures.
- Clean walls, windows, and other surfaces that become soiled.
- Check electrical, water, HVAC, thermostats, alarm and other systems regularly. Write work requests to obtain repairs.
- Lubricate hinges.
- Empty garbage receptacle and dispose of recyclable materials according to Parks policy.
- Check for vermin and pests.

Preventive Maintenance and Repairs

- Inspect entire facility for wear and tear.
- Check toilets and sinks for proper operation.
- Check and replace furnace and air-conditioning filters according to schedule or condition.
- Write work requests for painting, carpentry, electrical, plumbing and other crafts work as needed.
- Check fire extinguishers & exit lights per schedule of manufacturers' recommendations.
- When an electrical breaker is tripped, try resetting the breaker once only. If it trips again, contact Crafts Supervisor to dispatch an Electrician to troubleshoot and repair problem.
- If metal halide lights are pink-tinted, initiate a work request to the Electricians' Shop for replacement.
- In early fall, check functioning of heating systems by turning the system on high. Report any problems to Crafts Shop.

- When an alarm on a pump system is activated, deactivate alarm. Contact the Crafts Shop immediately. Do not continually reset pump system without consultation with Crafts Shop/Electricians.

13.8 Maintenance Barns and Buildings

Ongoing/Routine Maintenance

- Routinely check building for cleanliness. Schedule appropriate cleaning.
- Clean and service restrooms and kitchen areas. Replace consumable materials.
- Clean kitchen features and wash dishes.
- Regularly clean out refrigerators. Clean stoves etc.
- Clean up office areas. Keep well organized.
- Regularly replace light bulbs and wash windows.
- Regularly vacuum, mop, sweep and clean floors and rugs.
- Inspect locker rooms. Ask staff to keep their lockers and areas clean.
- Clean up shop areas at least once a week. Remove debris and stow tools and materials not used daily.
- Materials should be stored for ready access and to preserve in good condition.
- Clean up any spills and leaks with absorbent pads and kitty litter. Follow guidelines for blood-borne pathogens.
- Lubricate door hinges.
- When graffiti is found in a small area, attempt to remove it with only the Parks approved issued graffiti removal product. If unsuccessful, or for large areas, contact the Crafts Supervisor immediately for removal within 24-48 hours. **Never** paint over the damaged area.
- Secure any loose toilet seat. Report any damaged toilet seat to the Crafts plumbers.



- After washing down concrete or ceramic tile floors with a hose, thoroughly clean out all floor drains. Run hose at highest water pressure directly over floor drain grate.
- Sweep, vacuum and/or mop floors daily. Do not wax wood floors. Use a distilled vinegar and water solution to clean.
- Keep offices clean and organized.
- Clean and dust walls and woodwork annually.
- Pick up debris and empty garbage daily.
- Use electrical cords properly. Allow no multiple plug-ins. Use only three-pronged, grounded electrical cords. Discard immediately any damaged cords.
- Wash windows at least annually. Report all broken glass immediately to the Crafts Supervisor.
- Replace fluorescent and incandescent light bulbs as needed. Do not replace the High-Intensity Discharge (HD) bulbs used for spotlights, fields, parking lots, gyms and natatoriums. Initiate a work request to the Electricians' Shop for HD bulbs. Clean light fixture covers regularly.
- Do not obstruct heating vents and elements. Keep them clear of any combustible materials.
- For all heating systems, use high-pressure dusting air (available at Renton Stores) to do quarterly cleaning of all intake and exhaust vents and grids.
- Ensure that fire codes are met. Eliminate safety hazards. Do not store anything in front (within 3 feet) of electrical panels, switchboards or control panels. These "free and clear zones" must be marked with red floor paint. Initiate work requests for painting as needed.
- Do not store materials in front of, or nearby, any control valves, piping or other mechanical devices.
- Keep shrubbery and other vegetation away from the building walls.
- When an electrical breaker is tripped, try resetting the breaker once only. If it trips again, contact the Crafts Supervisor to dispatch an Electrician to troubleshoot and repair problem.
- If metal halide lights are pink-tinted, initiate a work request to the Electricians' Shop for replacement.
- In early fall, check functioning of heating systems by turning the system on high. Report any problems to the Crafts Shop.

- When an alarm on a pump system is activated, deactivate the alarm. Contact the Crafts Shop immediately. Do not continually reset pump system without consultation with Crafts Shop/Electricians.
- Regularly open and close faucets and shower valves to insure proper functioning. No excessive hand pressure should be needed to shut off a faucet or valve. There should be no leaking around fixture during operation.
- Initiate a work request to the Plumbers' Shop immediately for any problem with flushometers, faucets, urinals, toilets, sinks, drains, traps, showers, drinking fountains or hose bibs.
- Initiate a work request immediately to the Carpenters' Shop for any problem with a lock, door, hardware, window, siding, roof, gutter, cabinet, counter, floor covering, wall molding, structural component, toilet stalls, office cubicles or accessories, bridge, deck, stairs, walkway or any other building component.
- Initiate a work request immediately to the Electricians' Shop for any problem with electrical power, outlets, light switches, light fixtures, alarms, pumps, fans, motors, wiring, electrical panels or any other electrical device.
- Report to the Crafts Supervisor immediately all damaged electrical and plumbing fixtures.

Preventive Maintenance and Repairs

- Inspect entire building and report repair needs by work request.
- Check toilets and sinks.
- Check and replace filters on HVAC systems.
- Check doors and windows for seals and easy movement.
- Check floors, rug and other areas for wear and tear. Report replacement or repair needs.
- When an electrical breaker is tripped, try resetting the breaker once only. If it trips again, contact Crafts Supervisor to dispatch an Electrician to troubleshoot and repair problem.
- If metal halide lights are pink-tinted, initiate a work request to the Electricians' Shop for replacement.
- In early fall, check functioning of heating systems by turning the



system on high. Report any problems to the Crafts Shop.

- When an alarm on a pump system is activated, deactivate the alarm and contact the Crafts Shop immediately. Do not continually reset pump system without consultation with Crafts Shop/Electricians.

13.9 Gazebos/Kiosks

Ongoing/Routine Maintenance

- Check all wooden parts for rot and splintering. Write work requests for replacements or repairs as needed.
- Check all roofing. Clean gutters and down spouts as needed.
- Check all fasteners and re-tighten as needed.
- Sweep, blow or power-wash to clean off any accumulated dust dirt and organic debris.
- When graffiti is found in a small area, attempt to remove with the Renton Stores-issued graffiti removal product. If unsuccessful, or for large areas, contact the Crafts Supervisor immediately for removal within 24-48 hours. **Never** paint over the damaged area.
- Clean glass with glass cleaner. Never clean Plexi-glass with an ammonia-based cleaner. Clean plexi-glass only with a glazing cleaner specifically for plexi-glass products.
- Check exhibit materials and replace as needed.

Preventive Maintenance and Repairs

- Check and report any structural weakness and repair needs.
- Clean roof and flooring and replenish any coatings.

13.10 Bridges, Boardwalks and Trestles

Bridges, boardwalks and trestles carry pedestrian, bike and equestrian traffic across and over rivers and other obstacles on Parks' Trail System. Many are former railroad structures with heavy carrying capacity. Resource activities focus on keeping these structures clean, detecting and repairing rot and decay of wooden members, repairing vandalism, and allowing access for regular structural inspections.

The following are BMPs for maintaining bridges and trestles:

Ongoing/Routine Maintenance

- Clean and remove any accumulations of soil, sand and debris from the surfacing.

- Check fencing or rails. They should be secure and tight to protect the public. Report any problems for immediate repair.
- Clear any vegetation around the supports and entrances to the structures. This allows staff to inspect superstructure.
- Remove any ropes or other objects hanging from the structure that may be used for a swing.
- Check all wood periodically for rot and decay. Initiate work requests to Carpenters' Shop for all repairs and replacements.
- Check footings for erosion and stability.



Preventive Maintenance and Repairs

- Inspect for structural integrity annually.
- Mow and remove brush around base of all structures.
- Replace any badly splintered or rotted wooden pieces.
- Check fencing and guardrails for stability and strength.

13.11 Training

Staff should receive training in the proper maintenance and repair of buildings and structures. It is recommended that staff be trained in the following:

- Custodial cleaning, and operations.
- Decay and corrosion effects on structures.

